Travis Zhang

480-434-8095 | tz98@cornell.edu

EDUCATION

Cornell University, Ithaca, NY, *B.S. Computer Science* Sep 2020 – May 2024

- **Current Courses:** Multivariable Calculus, Discrete Structures, Object-Oriented Programming and Data Structures, Introduction to Machine Learning

Hamilton High School, Chandler, AZ July 2016 – May 2020

- Weighted GPA: 4.927/5.0, Unweighted GPA: 4.0/4.0
- ACT: 36; Math: 36, Science: 36, Reading: 35, English: 35
- **Courses:** Multivariable Calculus, Differential Equations, Linear Algebra, AP Java, AP Physics C: Mechanics and E & M
- **Scholarships:** Steve Sanghi Scholarship Award, Andy Grove Intel Scholarship, National Honor Society Semifinalist Scholarship, Impact Scholarship, Worth & Dot Howard Foundation Scholarship

EXPERIENCE

HackOurCampus Hackathon Aug 2020

- Developed iOS Geofencing app that reminded students to bring both COVID-related and personal items

ASU Robust Machine Learning Student Researcher April 2019 – Present

- Applied transformation-invariant constraints on adversarial training using Tensorflow to improve CNN performance. Implemented 3 algorithms to reduce the computational cost during adversarial training.
- Designed and implemented optimization algorithms in Pytorch to fool a Deep RL agent in a realistic scenario.

University of Central Florida's Competitive Programming Camp June 2017

- Learned about various competitive programming algorithms including Dijkstra's algorithm and Prim's algorithm; Competed in 5+ programming competitions at the camp

ASU Signal, Information, Networks, and Energy Laboratory Student Researcher Sep 2017 – April 2018

- Created program to temporally and spatially interpolate power outputs of solar panels of households in various locations using various python libraries (pandas, numpy, matplolib, scikit-learn)

Hamilton Robotics Team, *Head of Electrical Team, Head of Communications* Aug 2016 – May 2020

- Designed parts of robot using CAD software; Programmed robot using Java and FRC WPI Library; Recruited & trained 40+ Hamilton members

Robotics Volunteering, *Lead Mentor* Aug 2016 – May 2020

- Taught URM students from Title 1 schools programming and robot-building process

Mathworks Math Modeling Challenge, *Team Leader* Jan 2019 – Feb 2020

- Developed and implemented mathematical models to solve real-world problems; Wrote a 15+ page research paper to report experimental designs and results

PROJECTS

National Honor Society App July 2019 – Jan 2020

- Developed both the iOS and Android mobile application for Hamilton's NHS club; Developed and incorporated Google Firebase to create a personalized experience for users

CUSD Equity Symposium App Nov 2018 – May 2020

- Developed iOS app for the Chandler school district's annual equity symposium

Skin Cancer Diagnosis using Neural Networks Aug 2018 – April 2019

- Built Convolutional Neural Networks (CNNs) and Generative Adversarial Networks in Keras + Tensorflow to improve computer diagnosis of skin cancer.

HONORS AND AWARDS

- Association of Chinese American Physicians Bronze Prize (Nov 2019)
- Arizona Science and Engineering Fair 3rd place (April 2019)
- Arizona Science and Engineering Fair 3rd place (April 2016)
- Arizona Junior Science and Humanities Symposium 2nd place (April 2016)

ADDITIONAL INFORMATION

Computing Skills: Java, Python, Keras, Swift, Pytorch, Tensorflow, Numpy, Matplotlib, Pandas, Git/Github, HTML5, CSS3

- **Learning:** C++, Javascript, React

Miscellaneous Skills: English, Mandarin, Cantonese, Photoshop, Autodesk Inventor, Solidworks CAD

Interests: Photography, Piano, Adversarial Attacks in Machine Learning, Robotics, Airplanes